

ITCE 300/313: Quiz 1

Student Name:

Student ID:

- 1- The wave length of a periodic sinusoidal signal with a frequency of 28KHz with a propagation speed of 2×10^8 m/s equals to
- 2- Using Nyquist bandwidth formula, is the highest signal rate that can be carried by the a signal with frequency of 2.4KHz with $M=2$. and the rate can reach if M is increased to 8 levels.
- 3- In differential encoding, data are represented by rather than
- 4- is a biphase encoding scheme for digital signals.
- 5- A link that can transfer data in both direction, but one direction at a time.
- 6- List the advantages of digital transmission

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- 7- What are the three transmission impairments, list and define each of them

- a.
- b.
- c.

- 8- What are the advantages and disadvantages of NRZ

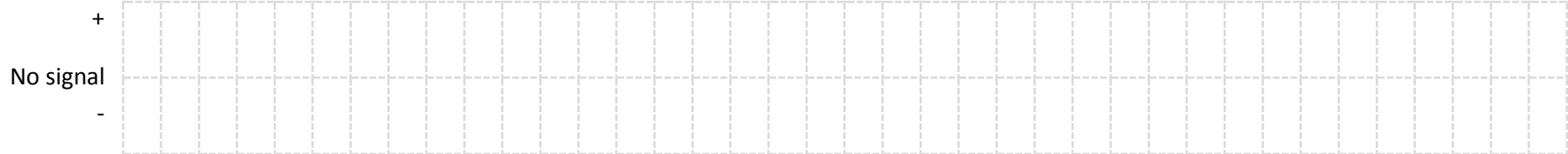
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- 9- Define the guided media, and write down two examples

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10- Use HDB3 to encode the following string of bits, assuming that this string started after a block of four zeros and the previous bit is negative.

1 0 1 0 0 0 0 1 0 0 0 0 1 1 0 0 0 0 1 1 1 0 0 0 0 1 1 1 1 0 0 1 0 1 0 0 0 0



11- Re-represent the following NRZ-L signal into NRZI and Bipolar-AMI

